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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,686	02/12/2001	Michael A. Peshkin	98,593-E	6130

7590 11/19/2003

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EXAMINER	
SHAPIRO, JEFFERY A	
ART UNIT	**PAPER NUMBER**
3653	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/781,686	PESHKIN ET AL.	
	Examiner	Art Unit	
	Jeffrey A. Shapiro	3653	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-10, 14-31 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazerooni (US 5,915,673). Kazerooni discloses the following multi-function hub.

As described in Claims 1 and 39;

1. a physical interface (222);
2. *a computational node disposed on the physical interface, the computational node comprising* programmable logic for implementing program controlled functions; (See col. 15, lines 33-35, indicating use of an electronic controller, which necessarily uses programmable logic or a functional equivalent thereof for operation of said controller. Note that the controller (221) can be a computer with input/output capability. See figure 13. This controller can also be construed to compute and calculate, therefore being a "computational node". (See also Kazerooni (US 6,386,513 B1) which discloses a computer with standard peripherals being used as the controller to such a multi-function hub.)

3. an input/output (I/O) interface *disposed on the physical interface , the I/O interface being adapted to communicate with the computational node and* a plurality of *other* computational nodes; (See figures 10, 16 and 19, for example, noting a variety of computational nodes are used throughout the system. See also col. 16, lines 63-67 and col. 17, lines 1-9 and lines 28-35. Note also col. 15, lines 33-35 which discuss a computer with electronic input/output capability, which would be obvious to one of ordinary skill in the art to attach to a network, the internet, or other systems. Note also that the controller/computer (221) of Kazerooni can be construed to be a physical interface for the system. Again, note that a computer has I/O ports, such as modems, USB and RS-232 ports, for example.

As described in Claims 2 and 3;

4. the programmable logic implements input/output communication functions (see col. 16, lines 33-35 and equations 1-11;)

As described in Claims 4, 6, 14 and 15;

5. the I/O interface provides communication to a plurality of sensors and actuators; (See col. 2, lines 45-67 as well as sensor (60), for example.)

As described in Claims 5, 16, 21-27 and 29-31;

6. an intent sensor (227) (see col. 20, lines 10-15, noting springs 298 and 300—note also screw (294));

As described in Claims 7 and 8;

7. an electrical interface to provide electrical power to a tooling; (Note that air pressure in line (19) to power vacuum or suction cups (18) is necessarily produced and sent through the pneumatic system using electrical connections. Also note that air pressure can be construed as a functional equivalent to electricity supplied to suction cups, which may be construed as a tool.)

As described in Claim 9;

8. user operable controls accessible from outside the hub (note controller (229) housed in housing (244);

As described in Claims 10 and 19;

9. a user interface connectable to an external computer or PDA (personal digital assistant); (Note that the computer/controller of Kazerooni is described in col. 15, lines 33-35 as having I/O capability. This implies that such a computer can be connected with other computers or a PDA, which is a computer.)

As described in Claim 17;

10. user programmable switches on the outside of the hub; (Note that the controller (229) can be pre-programmed (see col. 2, lines 60-64.)

As described in Claim 18;

11. a user display (note that the controller necessarily has to have a user display, or functional equivalent thereof, so as to allow an operator to interface with the system, for pre-programming purposes, for example.)

As described in Claim 20;

12. the physical interface comprises a swivel; (see col. 16, lines 20-22)

As described in Claim 28;

13. the intent sensor (227) is a hall effect sensor (see col. 19, lines 38-42;)

3. Claims 11-13 and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazerooni in view of Yuan et al.

Kazerooni discloses the hub assist device as described above. Kazerooni further discloses the following.

As described in Claims 11-13;

1. a computer with input/output capability.

Kazerooni does not expressly disclose the following.

As described in Claims 11-13 and 34;

2. a network interface in communication with an information network, LAN, or the internet.

As described in Claim 32;

3. the I/O interface uses a digital communication protocol to communicate with the plurality of computational nodes via the common data link;

As described in Claim 33;

4. the digital communication protocol is the Controller Area Network (CAN) protocol;

As described in Claim 35;

5. the protocol is an Ethernet protocol;

As described in Claim 36;

6. the common data link is a bus;

As described in Claim 37;

7. the common data link is a wireless data link;

As described in Claim 38;

8. the I/O interface uses a packet based communications to communicate with the plurality of communication nodes via the common data link;

Yuan et al discloses the following.

As described in Claims 11-13 and 34,

2. a network interface in communication with an information network, LAN, or the internet (see figures 5-7 of Yuan et al noting the interface with a computer network (mini-computer and host-computer interface).

As described in Claim 32;

3. the I/O interface uses a digital communication protocol to communicate with the plurality of computational nodes via the common data link (note that the LAN and internet necessarily use such a protocol);

As described in Claim 33;

4. the digital communication protocol is the Controller Area Network (CAN) protocol (note that this is a functional equivalent or obvious substitution for other protocols and that one ordinarily skilled in the art would find it expedient to use such a protocol in a control environment);

As described in Claim 35;

5. the protocol is an Ethernet protocol (again, note that this is a functional equivalent of other protocols);

As described in Claim 36;

6. the common data link is a bus (note that this is a functional equivalent of a LAN or the internet);

As described in Claim 37;

7. the common data link is a wireless data link (note that this is a functional equivalent of a LAN or the internet);

As described in Claim 38;

8. the I/O interface uses a packet based communications to communicate with the plurality of communication nodes via the common data link (note that the internet mentioned by Yuan is a packet based communications means);

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have given the hub system of Kazerooni a teleoperational capability by communicating with an intervening computer system.

The suggestion/motivation would have been to allow an operator to remotely handle objects in harmful locations. See Yuan et al, col. 1, lines 15-17.

Therefore, it would have been obvious to combine Kazerooni and Yuan et al to obtain the invention as specified in Claims 11-13.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-29 of copending Application No. 09/781,801. Although the conflicting claims are not identical, they are not patentably distinct from each other because the both claim a hub assist system with computer control.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

6. Applicant's arguments filed 9/22/03 have been fully considered but they are not persuasive. Applicant asserts that Kazerooni and Yuan do not read on Applicant's claims because they both send a signal to a "separate" controller. Applicant asserts therefore by inference that Applicant's system does not have a separate controller. However, Applicant's system uses a separate controller(105) or (110). They can be construed as separate components of Applicant's system. If they are considered as integral, then Kazerooni's and Yuan's systems can be considered to have integral controllers as they are connected to the system. Applicant's independent claims appear to be overly broad as to invite application of prior art such as Yuan and Kazerooni to reject Applicant's claims. Therefore, the rejection of Claims 1-39 is maintained.

Regarding the double patenting rejections, it is noted that they will be maintained until Applicant files a proper terminal disclaimer.

The Examiner encourages contact by the Applicant should there be any further questions.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Das et al is cited as disclosing a user interface subsystem for use in a human force amplification system.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (703)308-3423. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald P. Walsh can be reached on (703)306-4173. The fax phone number for the organization where this application or proceeding is assigned is (703)306-4195.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1113.

Jeffrey A. Shapiro
Examiner
Art Unit 3653

November 10, 2003

DONALD P. WALSH
SUPERVISORY PATENT EXAMINER
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